

CLASS EXERCISES

Determine the values of a , b , and c . Then solve each equation using the quadratic formula.

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|------------------------|---------------------|---------------------|
| 1. $2x^2 - 5x - 3 = 0$ | 2. $5x^2 - 7x = 6$ | 3. $x^2 + 6x = 10$ |
| 4. $x^2 - 10x = -13$ | 5. $2x^2 + 3x = -8$ | 6. $3x^2 - 2x = -1$ |

PRACTICE EXERCISES



Use technology where appropriate.

Solve each equation using the quadratic formula. Write solutions in simplest form.

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|---------------------------|--------------------------|--------------------------|
| 1. $2x^2 + 3x - 5 = 0$ | 2. $x^2 + 8x + 12 = 0$ | 3. $8x^2 - 2x - 3 = 0$ |
| 4. $2x^2 - 7x + 3 = 0$ | 5. $3x^2 - 4x - 2 = 0$ | 6. $4x^2 - 3x = 9$ |
| 7. $5x^2 + x = 3$ | 8. $3z^2 + 9z = 27$ | 9. $r^2 + 12r = 18$ |
| 10. $2r^2 + 13r + 16 = 0$ | 11. $2z^2 + z - 28 = 0$ | 12. $x^2 - 9x + 15 = 0$ |
| 13. $t^2 + 10t + 11 = 0$ | 14. $3s^2 + 4s + 10 = 0$ | 15. $x^2 - 12x + 25 = 0$ |
| 16. $8x^2 + 2x - 15 = 0$ | 17. $x^2 - 2x + 5 = 0$ | 18. $2x^2 + 4x + 15 = 0$ |

Solve each equation using the quadratic formula. Write the solutions in decimal form, to the nearest hundredth.

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| 19. $2x^2 - 5x - 3 = 0$ | 20. $3x^2 - 10x + 5 = 0$ | 21. $3x^2 + 4x - 3 = 0$ |
| 22. $6x^2 - 5x - 1 = 0$ | 23. $7x^2 - x - 12 = 0$ | 24. $5x^2 + 8x - 11 = 0$ |

Solve each equation using the quadratic formula. Write solutions in simplest form. In Exercises 43–48, solve for x in terms of a .

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| 25. $4x^2 = 4x + 3$ | 26. $2x^2 = 7x - 8$ | 27. $x^2 + 3x + 5 = 0$ |
| 28. $x^2 + 7x - 8 = 0$ | 29. $3x^2 + 5x = 7$ | 30. $4x^2 + 4x = 22$ |
| 31. $7x^2 - 2x = 25$ | 32. $5x^2 - 3x = 10$ | 33. $2x^2 - 1 = 5x$ |
| 34. $3x^2 + 2 = 8x$ | 35. $2x^2 + x = \frac{1}{2}$ | 36. $2x^2 - x = \frac{1}{8}$ |
| 37. $9x^2 + 3x + 4 = 0$ | 38. $15x^2 + 2x + 1 = 0$ | 39. $5x^2 = 2x - 8$ |
| 40. $6x^2 - x + 24 = 0$ | 41. $\frac{x+2}{5} = \frac{3}{x+1}$ | 42. $\frac{x-3}{2} = \frac{6}{x-2}$ |
| 43. $2a^2x^2 - 6ax = -5$ | 44. $3a^2x^2 + 8ax + 5 = 0$ | |
| 45. $2x^2 + ax^2 = 4x + 4a$ | 46. $5a^2x^2 - 10ax = 12$ | |
| 47. $x^2 + 2ax = 25a^2$ | 48. $ax^2 + 3a^2x - 10a^3 = 0$ | |